



Tintic Mining District, Utah and Juab Counties, Utah

High-altitude AVIRIS Mapping Results

Fe-bearing Minerals

Highly Acidic Mineral Assemblages:

Iron Sulfate Minerals

- fine-grained jarosite: mine waste
- coarse-grained jarosite: mine/natural
- goethite + jarosite

Acidic to Neutral Mineral Assemblages:

Iron Hydroxide Minerals

- goethite: coarse-grained
- goethite: medium-grained
- goethite: fine-grained
- goethite: thin coating

Iron Oxide Minerals

- hematite: medium- to coarse-grained
- hematite: fine-grained

Other Iron and Water Classes

- other iron oxides and hydroxides
- water + red algae + sediment (heap leach pond)

Other Iron Minerals:

Fe²⁺-bearing Minerals

- minerals with generic Fe²⁺ absorptions (including chlorites and/or muscovites)
- with goethite and muscovite
- with hematite

Mineral Assemblages with Low to Moderate Acid-Neutralizing Potential:

- chlorite + muscovite (argillic alteration)
- chlorite + goethite (propylitic alteration, associated with calcite and/or epidote)

Note: Mineral assemblages and individual mapped surface materials are ordered by acid-producing potential from top (high) to bottom (low).